

FUN3D/Suggar++ Training Workshop

April 27-29, 2010

NASA Langley Research Center

- Workshop participants must be US citizens. Interested US Persons (i.e., green card holders) should please contact fun3d-support@lists.nasa.gov for options.
- Interested participants should please fill out the registration form on the main page at <http://fun3d.larc.nasa.gov> by 5:00 pm EST, March 15, 2010. **Note this alone does not guarantee a spot in the workshop. Space is limited and attendance may be limited within individual organizations. Registrants will be notified via email by 5:00 pm EST, March 16, 2010 if a spot is available to attend. Please do not book non-refundable travel until you have been notified that a slot is available for you in the workshop. Each interested individual within an organization should please fill out a separate registration form.**
- **All participants must have a current FUN3D Software Usage Agreement on file with NASA Langley. If you are not sure that you do, please contact fun3d-support@lists.nasa.gov well ahead of the workshop dates. This form frequently requires approval of your organization's legal office, management, etc, so this cannot be done in-person at the workshop!**
- Individual Linux workstations and a cluster with several hundred cores will be provided to participants for hands-on demo sessions during the workshop. All necessary software will be pre-installed. Participants will not be allowed to connect personal machines to the network; however, FUN3D team members will be available to assist participants with installation/execution issues on such machines during one-on-one sessions.
- Participants may bring moderate-sized cases (i.e., grids) with them for individual assistance during one-on-one sessions with FUN3D team members, time-permitting. Participants should be able to access external networks to obtain personal data, but such access is not guaranteed at this time. Therefore, such data should be brought on a memory stick, CD, or DVD.
- Light snacks and beverages will be provided during breaks. A no-host dinner is planned for the evening of April 27th.
- **Workshop instruction will focus specifically on FUN3D training, not CFD topics in general.** Participants are expected to have a basic working knowledge of CFD methods as well as basic Linux commands and tools such as ssh, scp, etc.
- **Other than basic information directly relevant to FUN3D, grid generation will not be covered at the workshop.**
- Workshop instruction and hands-on demos will use FUN3D v11.0. Although FUN3D will be pre-installed on the workshop machines, participants are encouraged to obtain this release ahead of time from the FUN3D team and familiarize themselves with it as much as possible. Workshop instruction will assume no basic working knowledge of FUN3D, but will quickly progress to more advanced features and instruction.
- An optional wind tunnel and computational facilities tour is planned for interested participants.
- The workshop will be broadcast online via WebEx and dial-up audio. If you are interested in participating remotely, please indicate this on your registration form. You will be provided with WebEx login and dial-up information at a later time.
- The training facility is not currently handicapped-accessible. If you require special accommodations, please contact fun3d-support@lists.nasa.gov ahead of time for options.
- Though not anticipated at this time, topics and instructors shown on the agenda may change slightly subject to availability. As many members of the FUN3D development team as possible will try to be available for assistance/questions during the workshop.

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Tuesday, April 27: FUN3D Day One

7:30-8:00 Arrival and Check-In	NASA LaRC Main Gate NASA LaRC Nav Center, Second Floor, Bldg 1212
8:00-8:30 Welcome and Introductions	Joe Morrison Acting Head, Computational AeroSciences Branch
8:30-9:00 Workshop Environment	Eric Nielsen Computational AeroSciences Branch
9:00-9:30 Capabilities/Applications Overview	Eric Nielsen Computational AeroSciences Branch
9:30-10:00 Compilation and Installation	Bill Jones Computational AeroSciences Branch
10:00-10:15 Break	
10:15-12:00 <i>Interactive Session</i> Gridding Considerations, Solution Basics, and Visualization	Eric Nielsen Computational AeroSciences Branch
12:00-1:00 Lunch	NASA LaRC Cafeteria
1:00-1:30 Incompressible Simulations	Beth Lee-Rausch Computational AeroSciences Branch
1:30-2:00 Supersonic/Hypersonic Perfect Gas Simulations	Jeff White and Mike Park Computational AeroSciences Branch
2:00-2:30 Boundary Conditions, Turbulence Models	Jan-Renee Carlson and Chris Rumsey Computational AeroSciences Branch
2:30-2:45 Break	
2:45-4:15 <i>Interactive Session</i> Time-Dependent and Dynamic Mesh Simulations	Bob Biedron Computational AeroSciences Branch
4:15-5:00 One-on-One Time	FUN3D Development Team
7:00-8:30 No-Host Dinner	Location TBD

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Wednesday, April 28: FUN3D Day Two

8:00-8:30 Aeroelastic Simulations	Bob Biedron Computational AeroSciences Branch
8:30-9:00 Overset and Rotorcraft Simulations	Bob Biedron and Beth Lee-Rausch Computational AeroSciences Branch
9:00-9:45 Thermochemical Nonequilibrium Simulations	Peter Gnoffo Aerothermodynamics Branch
9:45-10:00 Break	
10:00-11:30 <i>Interactive Session</i> Feature- and Adjoint-Based Mesh Adaptation	Mike Park Computational AeroSciences Branch
11:30-12:30 Lunch	NASA LaRC Cafeteria
12:30-2:00 <i>Interactive Session</i> Adjoint-Based Design Optimization	Eric Nielsen Computational AeroSciences Branch
2:00-2:30 Code Development within the FUN3D Framework	Bil Kleb Aerothermodynamics Branch
2:30-2:45 Break	
2:45-5:00 One-on-One Time Optional Wind Tunnel, Computational Facilities Tour	FUN3D Development Team

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Thursday, April 29: Suggar++

9:00-10:15 Suggar++ for Unstructured Grids: Background and Technical Details	Ralph Noack and David Boger Penn State University
10:15-10:30 Break	
10:30-12:00 Using Suggar++ for Unstructured Grids	Ralph Noack and David Boger Penn State University
12:00-1:00 Lunch	NASA LaRC Cafeteria
1:00-3:30 Using Suggar++ for Unstructured Grids, Cont'd.	Ralph Noack and David Boger Penn State University
3:30-5:00 One-on-One Time: Using Suggar++	Ralph Noack and David Boger Penn State University